

What is claimed is:

1. A testing method for semiconductor integrated circuits
wherein,

in the testing method testing by a semiconductor testing
apparatus having a comparison judgment circuit judging
a semiconductor integrated circuit integrated with a plurality
of DA converters and a base voltage generation circuit
determining the gradation output voltage characteristics,
by comparison of the gradation output voltages and reference
voltages, wherein

the gradation level intervals to be the test objects are decided
by the setting of different voltages to be applied at the base
power supply input terminals of said base voltage generation
circuit; and

said voltages are supplied at and between said base power supply
input terminals from said semiconductor testing apparatus;
and

by assigning correspondence between the input gradation data
signals of the gradation levels of that interval, and the
gradation output voltages,

the gradation output voltage testing through said
semiconductor testing apparatus is made to be digital judgment.

2. A testing method for semiconductor integrated circuits
according to claim 1, wherein,

according to the voltages provided at and between the base

5

power supply input terminals from said semiconductor testing apparatus, said base voltage generation circuit increases or decreases the neighboring gradation output potential differences of every analog voltage output of said semiconductor integrated circuit.

10

3. A testing method for semiconductor integrated circuits according to claim 1, wherein,

by assigning correspondence between the voltage settings provided from said semiconductor testing apparatus and the input data, said DA converters and the base voltage generation circuit selectively test the output levels of the analog voltage outputs.

15

4. A testing method for semiconductor integrated circuits according to claim 1, wherein,

20

proving of the reliability of the test accuracy is made possible by treating the mutual relationship between the computation of the input data corresponding to every output voltage level and of the expectation values of the output voltages in the semiconductor integrated circuit specification and the setting of the output voltage expectation value levels, and the voltage judgment value levels of said comparison judgment circuit carrying out the judgment of the output voltages, and the change of the setting of the test numbers with time, altogether as address or parameter management.

5. A testing device for semiconductor integrated circuits, wherein,

in a judging testing apparatus, through a comparison judgment circuit, a semiconductor integrated circuit integrated with a plurality of DA converters and a base voltage generation circuit determining the gradation output voltage characteristics, by comparison of said gradation output voltages and reference voltages, wherein different voltages are output to the base power supply input terminal for the end of one side of the gradation level interval being the test object of said semiconductor integrated circuit, and the base power supply input terminal of the other end of said interval.

6. A testing device for semiconductor integrated circuits according to claim 5, wherein,

said voltages are output to more than two base power supply input terminals including the base power supply input terminal at the end of at least one side of the gradation level interval being the test object of the semiconductor integrated circuits.

7. A testing device for semiconductor integrated circuits according to claim 5, wherein,

base power supply input terminals not connected with the semiconductor testing apparatus are disposed in the gradation level interval being the test object of the semiconductor integrated circuit.

8. A testing device for semiconductor integrated circuits according to claim 5, wherein, more than two gradation level intervals being the test objects of the semiconductor integrated circuits are disposed.